Exploring the Dimensions of Dynamic Capabilities: Developing and Validating a Measurement Instrument

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DOI: 10.1043/mester/49.2020.42

Abstract

This study was conducted to develop and validate an instrument in banking industry. A mixed research design was used to understand the nature of Dynamic Capabilities in the banking sector. Items for the assessment of Dynamic Capabilities were developed with a dataset comprised of 692 people and the statistical analyses supported both the validity and the reliability of this measurement instrument. This instrument consists of 36 items designed as Four Point Likert Type Item. The study is restricted to the investigation that took place in certain banks operating in Turkey and North Cyprus. The implications of the study suggest that the Dynamic Capability could be used by managers and researchers to improve the firm performance of their banks. Research results makes a strong contribution by filling a gap in the literature as it focuses on the assessment of the Dynamic Capability performance of banks to understand their level of competitiveness.

Keywords: Dynamic capabilities, likert type, firm performance, banking sector

Introduction

Banks are important for financial intermediation in national economies as well as for funding their own communities and the world. In fact, banks should gain and maintain a competitive advantage in line with their strategic objectives in the geographic regions they serve. The firm's performance, business relationships, and alliance for an organization's competitive advantage are presented in conjunction with the Dynamic Capabilities Theory (DCT) and the Resource Dependence Theory (RDT), the Resource-Based View (RBV) extension (Lin and Wu 2014: 407, Hagedoorn and Duysters 2002: 168, Jackling and Johl 2009: 494).

The RBV consider resources as the key achieving superior company performance in order to attain a sustainable competitive advantage. Looking at the economic contributions of RBV, Selznick defined talents or resources based on the Theory of

Distinctive Competencies and Selznick also says that capabilities have a potential to carry an organization onward for achieving the competitive advantage (Altuntuğ, 2009, 449). Penrose developed a theory regarding how resources affect firm growth through his study of Theory of the Growth of the Firm (Penrose, 1995). The Austrian School of Economics is an economic school that has contributed to the theoretical development of the RBV by focusing on the basic principles of the RBV (Young, 1995). In terms of strategic management science, the RBV emerged with Wernerfelt's article titled A Resource-Based View of the Firm in 1984. The RBV has received considerable attention in the literature, where important studies have been conducted in this field by Penrose (1995), Barney (1991), Grant (1996), Teece et al. (1997), Makadok (2001), Winter (2003), Teece (2007). According to the RBV, the most important reason for the performance differences of enterprises is their resources. One of the most important factors that can explain this situation is that the company's human resources enables it to achieve a competitive advantage.

The criteria for achieving a competitive advantage include having valuable, scarce, and difficult to imitate and unsubstituted resources (Wei and Lau 2005: 1902). The other theory in the literature that focuses the needs of organizations in terms of their survivability and that explains the resource tendency is the RDT. The theory was first introduced by James Thompson in 1967, and then improved under the leadership of Jeffrey Pfeffer, Gerald R. Salancik, and Howard E. Aldrich (Koçel, 2014: 414). RDT'S basic ideas: the importance of social context; strategies for increasing the autonomy of organizations and maintaining their interests; and the importance of power to understand the internal and external actions of organizations (Davis and Cobb 2010: 5).

The RBV and RDT are the subjects of research on competition and sustainable competitive advantage. Many researches have been conducted in the context of the RBV and RDT, even though few studies have applied a combination of these theories to investigate the relevance of resources for gaining a competitive advantage at the firm level. Although they are generally considered to be two similar concepts in the literature, their approaches are in fact different. The RBV has emerged from the evolution of strategic management theories, whereas the RDT has emerged from the evolution of organizational theories (Şeref, 2015: 4).

In the literature, one of the models explaining competitive advantage is Industrial Organization Theory (IOT) (also called opportunity approach –OA-) which focuses on external factors (Zou and Cavuşgil 2002: 45). On the other hand, the RBV focuses on internal firm-specific factors. Cantürk says RBV and OA are not contrary, and he supports this by the statement that both external and internal environment has to be consider togather (Cantürk and Çiçek 2016: 101). While RDT can be the source of power for the department or people who bring the critical resources for the organization from the external environment to the business, RBV explains the creation and nurturing of resources and capabilities, and there is an internal to external impact (Ahammad et al. 2017: 630). This is considered as the main difference between these two views. The main goal of both theories is to increase the effective use of company

resources, thus targeting better performance among the companies. Factors that add value to the existence of an organization are organizational capabilities as well as organizational resources. Organizations need Dynamic Capabilities (DC) that enable them to create new resources to compete. DC describes competitive advantage and performance in dynamic markets (Eisenhardt and Martin 2000: 1108). There is increasing interest among researchers on the DC approach developed as an extension of the RBV (Wang and Ahmed 2007: 35). Looking at the evolution of management theories; theories and models complement each other's missing aspects.

DC classifications and measurement methods differs from each other. Sensing, learning, integrating, coordination (Rashidirad et al. 2017: 5-10), sensing, reconfiguring (Wilden and Gudergan 2015: 181), sensing, learning, integrating, coordinating, reconfiguring (Pavlou and El Sawy 2011: 239), coordination, learning, competitive (Protogerou et al. 2011: 616) are some of them. In this study, DC measurement is based on the concepts of sensing capabilities (Sc), seizing capabilities (Szc) and managing threats and reconfiguring capabilities (Mtrc) of Teece (2007: 1322, 1326, 1334), although it also complies with the definition of DC developed by Teece and Pisano (1994: 1).

In the recent literature, studies have been conducted on how performance can be improved with the development of DC. Gupta et al. (2018), developed a theoretical framework based on DCT where they conceptualized cloud enterprise resource planing and big data predictive analytics as organizational capabilities which have positive impacts on FP under the moderating effects of organizational culture. Jantunen et al. (2005) analyzed the relationship between entrepreneurial orientation, DC and international performance, demonstrating that DC have a strong impact on international performance. Desai et al. (2007) concluded that DC play a crucial role in achieving competitive customer relationship management performance in banking, telecom and retail industries. When Aluvanze and Senaji (2017) investigated the impact of bank innovations on commercial bank performances, it was discovered that to the banks adjusted to disruptive technologies by restructuring resources. Maphumulo (2017) showed that the impact of technological opportunism on firm performance was perceived as a positive as it mediated and mitigated the effects of strategic entrepreneurship in banking. In researching these roles, he combined RBV of vision and DC perspective. Singh and Rao (2017) demonstrated that investing in DC in the banking sector is beneficial for tackling competitive pressures, and also showed the impact of DC on financial and non-financial performance. Both knowledge management activities and dynamic talents were found to have a significant impact on employee performance in the Pakistani public and private banking sectors (Kashif and Hilman 2018). While some of these studies have been explained in a strong framework, some cases have been criticized that empirical studies that are not adequately explained are weak and not presented in different theoretical and national contexts.

While developing the rationale for establishing a link between the banking sector and firm performance, the DC perspective was instrumental in this study. Although elements of DC have been frequently explored in previous studies, no academic study has

investigated the DC elements in the banking sector. The fact that current measurements are not differentiated is a neglected aspect in the process of developing the competitive strategies of banks. Although our study draws the main research question from these considerations, the aim is to develop a measurement instrument in line with the opinions of the participants in order to determine DC that will increase the capacity of banks to operate and maintain their assets in a competitive environment. The configuration of this article begins with a brief introduction. Then, the theories related to the basic terminology of DCT are presented, their connections with the research are discussed and the research gaps that the study addresses are identified. In addition, we aim to resolve the problem of a lack of qualitative and quantitative research on this subject.

Methods and Research Design

The research was conducted with a mixed research design in order to ensure that the validity and reliability of the study were high. This method consists of two stages of successive research processes, minimizes the weaknesses of qualitative and quantitative approaches and uses multiple data collection (Balcı 2015: 43).

Sample and Participant

In order to increase the ability to represent the universe, in the first step snowball sampling used to determine the data sources among senior bank managers. A pre-interview was conducted with a senior manager to test the level of understanding and serving the questions. Thus, the first sample of the study was formed. The level of analysis of the Step 1 in which more people are included in the list with the help of the people reached is 16 people. After the scale questions were formed, the main population was the banking sector employees in Turkey and Northern Cyprus. Convenience sampling, one of the non-probability sampling methods, was used (Saunders et al. 2009: 234). Respondents were included in the sample. Thus, time and cost advantages have gained speed and practicality. By determining the differences in perception of participants with this method, according to the results of validity and reliability studies, it will be determined that the scale can be used in the whole measured geography.

Assumptions

The respondents' professional experience and knowledge were satisfactory, they gave equivalent and sincere answers to questions, they were knowledgeable about DC, the validity and reliability of the research data were sufficient to make approximate assumptions, and the data were obtained and analyzed in a healthy way.

Limitations

Due to the nature of the qualitative research method, the sample number is limited and the quantitative data are limited to banks in Turkey and Northern Cyprus. The subject of the study is limited to DC and its validity is limited to the tools used in the study (reliability of the accuracy of the answers given to the questions prepared based on the literature and the answers of the respondents).

Interview Protocol and Procedure

The participants were informed that excerpts from the research results would not include the names of individuals and banks. In order to obtain accurate and detailed information at the qualitative stage, the literature was scanned, and open-ended questions were prepared based on Teece's (2007) DC classification. The data collection instrument was a one-to-one semi-structured interview. According to the topics to be answered, the interview guide was arranged in a systematic and structured manner. The participants were asked: what the dynamic capabilities elements mean and how the activities are conducted. Due to the nature of qualitative research, the respondents were limited to the interview guide prepared by the researcher. The average time for the interviews was 30-60 minutes. Face-to-face interviews with the participants provided two types of qualitative data. The first is the transcription of the interviewee's words and the other is the participant's responses via e-mail. While DC were designed on a cross-table in a logical sequence, deficiencies were seen in some categories of business environmental elements, and the participants were contacted again to obtain answers. Longitudinal research data were collected on the same subjects at different times. In the quantitative stage, participants were contacted face-to-face, via telephone and e-mail channels. Data were collected at the rate of participant demands.

Data Analysis

In the first step of the study, the inductive method and phenomenological approach were applied (Balcı 2015: 203). Interviewee opinions were analyzed then divided into categories. The participants received feedback about whether the summarized findings accurately reflected their experiences. The participant control approach was applied for the validity analysis of qualitative data. The findings were analyzed and discussed in a descriptive way. When the qualitative phase was connected to the quantitative phase, the interface point data was combined and a 36-item questionnaire in Turkish language was prepared. The quantitative approach taken consisted of a survey.

The credibility of the DC measurement tool has been demonstrated. In order to determine the degree of measurement of the scale, the content validity was examined: (1) In the qualitative stage, DC and environmental elements of the enterprise were correlated in a cross-table. This stage, in which conceptual categories of measurement are determined conceptually, provides the validity of the scale in a logical way. (2) The scope validity of the scale was provided quantitatively in statistical manner. The sentence structure and the accuracy of the questionnaires were tested in the pilot study in terms of quality. Based on the suggestions and criticisms of the sample group about the survey, certain statements in the questionnaire were revised. After conducting the pilot study, the questionnaire developed in Turkish was translated into English. Then, this survey was back-translated from English to Turkey. It was approved by Lecturers and two senior executives from deposit banks.

The scale form was prepared from does not describe my organization (0) to describe my organization most of the time (3). According to Büyüköztürk et al. (2019: 144), the use of a neutral point leads to the tendency of the participants to easily mark this response. This scale was determined as quart Likert Type Item as a double number by avoiding the

use of a neutral point such as 'undecided or uncertain'. This helped to ensure the internal validity of the scale.

Explanatory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were used to obtain evidence regarding the structural validity of the scale. To determine the number of factors, EFA was performed with a data set of 492 in Step 3. In Step 4, in order to establish a strong factor structure and validate the results of the first EFA, EFA was performed again by adding a 200-person data set to the 492-person data set in Step 3. In Step 5, CFA was performed with a total data set of 692 people. Finally, the article findings are summarized by explaining and discussing the results. All was analyses were conducted in SPSS 24.0 and AMOS Graphics 23 statistical programs.

Step 1. Descriptive Analysis

The sample consisted of 9 male and 7 female participants with 10 to 30 years of industry experience. Eight were graduates and 8 were undergraduates. One was on the board of directors, 1 was a general manager, 2 were middle-level manager, 7 were senior executives, and 5 were other staff members. It is thought that the demographic characteristics of the participants reflected different opinions and thus gave rise to a complex phenomenon. Table 1 summarizes the categories in which the twelve environmental elements of a bank organization and the DC elements are associated.

Table 1. DC Framework With Cross-Tabulation

EE		Sc	Szc	Mtrc
Internal Environment	FA	Sc1-comprasion of accounting-finance items with competitors	Szc1-creating financial data strengthening models	Mtrc1-revising revenue-cost strucutre
	HR	Sc2-analyzing the staff requirements	Szc2-supporting staff demands	Mtrc2-developing personel policies
	OS	Sc3-strengthening the organizational structure	Szc3-determining decision mechanisms	Mtrc3-developing operational units and activities
	SD	Sc4-strategy opportunities assessment	Szc4-capturing opportunities, developing strategies to manage risks	Mtrc4-developing strategic plans, managing risks
Sectoral Environment	COM	Sc5-determining needs before competitors	Szc5-proposing an offer in the work area before the competitors	Mtrc5-strengthening the competitive structure
	CUS	Sc6-offering customers the option to make complaints and suggestions	Szc6-evaluating the satisfaction and dissatisfaction of customers	Mtrc6-changing products, services and processes according to the customer
	SUP	Sc7-provision of requirements in	Szc7-integrating the supplier service with	Mtrc7-changing the way, the suppliers

	optimum conditions	corporate identity	and services are procured
SEC	Sc8-comparing sectoral changes	Szc8-developing the upper segment of sectoral changes	Mtrc8-revising resources, capabilities and processes
TRD	Sc9-producing digital technology, hot sale, research and development projects	Szc9-creating automation and hot sale business models	Mtrc9-using business models and integrating them with the environment
FM	Sc10-monitoring and reviewing financial markets	Szc10-developing policies for financial markets	Mtrc10-configuring financial products, services and processes
PLE	Sc11-predicting the impact of political and legal changes	Szc11-converting political and legal changes into services and products	Mtrc11-establishing resource utilization according to political and legal changes
INT	Sc12-monitoring international dynamics	Szc12-taking the international service as a model	Mtrc12-revising organization following international operation

General Environment

EE: Environmental elements , FA: Finance accounting, HR: Human resources, OS: Organizational structure, SD: Strategy development, COM: Competitors, CUS: Customers, SUP: Suppliers, SEC: Sectoral change, TRD: Technology R&D, FM: Financial markets, PLE: Political legal environment, INT: International
Source: Developed for this research

In the first step of the research, Dynamic Capabilities were classified in the banking sector as a result of defining, interpreting and reaching the results. On the horizontal axis of the table, DC are listed for three elements and DC elements are defined. DC: Refresh and improve the resource base and capabilities to meet global changes and competitor strategies and maximize profitability. Sc: The ability of organizations to compare digital and sectoral changes, copy-paste, identify opportunities before competitors. Szc: The ability of organizations to create opportunities that will form the upper segment of digital and sectoral changes, and to develop business models and strategies that can be presented to the field before competitors. Mtrc: To revise the organization, resource usage and legislation following the sectoral developments, is the ability to integrate competitive strengthening models with the internal and external environment. The environmental elements of the enterprise are listed on the vertical axis. Internal environment: the organization's planning, management and evaluation

process, as well as organizational knowledge, skills and attitudes determine the level of performance. Sectoral environment: refers to the market conditions of the sector in which the organization interacts. Any communication in this environment has a direct impact on the performance of the organization. General environment: the environment where all variables cannot be controlled outside the organization. Changes in general conditions will alter the performance needs of the organization and the resources to be met. In addition to sensing technological, legal, economic and global changes, it is necessary to develop the ability to create and reconstruct models that will adapt to them in order to make reactive and proactive DC analysis. It is believed that considering which DC levels the categories identified in the organization are effective on and whether they will have an impact on the organization and the competitors in the future will contribute to the sector-specific strategic decisions. For this reason, it is useful to identify a list of key factors at the micro -business and industry- and macro -country- levels. The result categories in this table were accepted as a form and after the development of measurement tool questions with each theme, the second step of the study was started.

Step 2. Pilot Study

Based on 47 survey data collected from Turkey and Northern Cyprus, the Dimension of DC is disclosed. In the pilot study analysis, the KMO: 0.755 value is greater than the threshold of 0.50 recommended in the literature. These items contribute sufficiently to the current scale. BTS results, chi-square value (x2= 2077,499) was statistically significant (p= 0.000< 0.001). According to all these values, the data structure is suitable for factor analysis.

Step 3. Explanatory Factor Analysis

During the scale development process, EFA was performed on the data collected from 492 participants to determine the number of items. Factor analysis was performed using the Principal Component Analysis (PCA) method as the most widely used factor extraction method in social sciences for 36 items. Varimax (kappa= 4) method and orthogonal rotation method were preferred as the most commonly used technique because it was desired to create independent factors. Accordingly, as the KMO 0.968 value approaches 1, the the data set is considered to be highly efficient in measuring the phenomenon. The result of BTS chi-square (x2= 1 3395.623) is statistically significant (p= 0.000< 0.001). The data set is effective in measuring the phenemon and sub-dimensions of the phenomenon (Kalaycı 2010: 327). The data set is EFA compliant. According to EFA findings, the scale has a factor of 4 according to the scree plot consistent result of Kaiser's Eigen value greater than 1 rule. These factors explain 50.915%, 4.842%, 3.894%, and 3.099% of the variance, respectively. While the cumulative variance explained in social sciences was at least 60%, the data explained 62.750% of the total cumulative variance (Albayrak 2006: 145). The number of substances and naming of the factors obtained are as follows: 1st Factor: 9 items Macro Dimension (MD); 2nd Factor: 12 items Task Dimension (TD); 3rd Factor: 12 items Supervisory Dimension (SD); 4th Factor: 3 items Account Dimension (AD). Factor loading values (between 0.522 and 0.728), extraction values (between 0.505 and 0.744)

and anti-image correlation values (between 0.940 and 0.983) of each substance on these 4 factors are given in Table 2. The Cronbach's Alpha values for these four factors were Macro Dimension (MD) 0.935; Task Dimension (TD) 0.935; Supervisory Dimension (SD) 0.937, Account Dimension (AD) findings from 0.754 dataset are reliable.

Table 2. Extractions, Anti-Image Correlation and Factor Load Values

Items	E	AIC	Factor 1	Factor 2	Factor 3	Factor 4
Sc11	,637	,975	,684			
Mtrc10	,652	,982	,672			
Sc12	,692	,975	,661			
Szc12	,686	,962	,655			
Szc11	,665	,973	,638			
Mtrc12	,663	,961	,636			
Mtrc11	,632	,975	,634			
Sc10	,566	,953	,630			
Szc10	,594	,962	,622			
Mtrc9	,685	,958		,716		
Szc9	,619	,953		,710		
Sc9	,641	,973		,681		
Mtrc7	,594	,966		,614		
Mtrc6	,601	,968		,608		
Szc6	,604	,965		,599		
Sc6	,535	,970		,588		
Sc8	,505	,972		,574		
Szc7	,592	,972		,561		
Szc8	,576	,975		,528		
Sc7	,553	,980		,523		
Mtrc8	,590	,983		,522		
Szc2	,659	,953			,714	
Mtrc2	,681	,972			,683	
Szc5	,630	,948			,668	
Sc2	,659	,960			,661	
Sc5	,669	,954			,658	
Szc3	,634	,977			,656	
Mtrc5	,659	,982			,615	
Sc3	,672	,976			,591	
Sc4	,615	,977			,562	
Szc4	,636	,969			,538	
Mtrc3	,590	,974			,530	
Mtrc4	,582	,972			,529	
Sc1	,513	,968				,728

Mtrc1	,714	,940				,719
Szc1	,744	,948				,580

E: Extraction, AIC: Anti-image correlation

Step 4. Repeating the Explanatory Factor Analysis a Replicated Sample

In this step, EFA was repeated by 692 people in order to establish a strong factor structure and validate the first EFA results. In Step 4, Principal Component Analysis method and Varimax (kappa = 4) method are used together as in Step 3. KMO for this data set is 0.972. According to the BTS results, chi-square (x2 = 19009.419) was statistically significant (p< 0.001). EFA results for this data set at sig 0.000 level are also suitable for evaluation. DC consists of 4 factors as a result of repeated EFA. The description of the sub-elements of DC according to the order of 692 data sets is as follows: MD 51.493%, TD 4.597%, SD 3.959%, AD 2.996%. The 4-factor structure rotated according to the Varimax method explained 63.045% of the variance in total. This ratio shows that each item explains enough variance in the factor.

The Factor Loading of 36 items in Table 3 varies between 0.515 and 0.717. The variables below the factors in Step 3 and Step 4 are considered to be quite good 0.50 and above as absolute value (Kalaycı, 2010: 330). The extraction values under Communalities values of the substances in Step 3 and Step 4 are greater than 0.3 for all 36 items (Pallant, 2007: 196, cited from Küçük et al. 2014: 386). Extraction values are between 0.460 and 0.723. This shows the quality of items. With the Anti-Image Correlation matrix main axis elements, the adequacy of each item in the scale was examined. This value provides a condition of greater than 0.50 for each item (Özdamar, 2016: 151). Distribution of 36 items to 4 factors as in the 4-factor structure obtained in Step 3. Moreover, MD has consisted of 9 items, factor loads have changed between 0.562 and 0.699, extraction values have changed between 0.505 and 0.694, and anti-image correlation values have changed between 0.956 and 0.983. TD has consisted of 12 items, factor loads have changed between 0.530 and 0.674, extraction values have changed between 0.505 and 0.642, and anti-image correlation values have changed between 0.961 and 0.988. SD has consisted of 12 items, factor loads have changed between 0.515 and 0.686, extraction values have changed between 0.578 and 0.710, and anti-image correlation values have changed between 0.959 and 0.984. Lastly, AD has consisted of 3 items, factor loads have changed between 0.555 and 0.757, extraction values have changed between 0.460 and 0.723, and anti-image correlation values have changed between 0.951 and 0.973. Cronbach Alpha values of the factors were found as MD: 0.934, TD: 0.936, SD: 0.939, AD: 0.757. Based on these values, the data for the scale is very reliable.

Table 3. Repeating Extractions, Anti-Image Correlation and Factor Load Values

Items	E	AIC	Factor 1	Factor 2	Factor 3	Factor 4
Szc12	,694	,956	,699			
Sc12	,710	,974	,696			

Mtrc12	,680	,962	,675				
Szc11	,679	,975	,670				
Mtrc10	,665	,983	,668				
Sc11	,627	,977	,667				
Mtrc11	,647	,976	,663				
Szc10	,596	,968	,617				
Sc10	,505	,958	,562				
Szc9	,608	,961		,674			
Mtrc6	,642	,974		,651			
Mtrc9	,637	,964		,641			
Mtrc7	,588	,975		,633			
Sc9	,631	,981		,628			
Szc6	,640	,965		,625			
Szc7	,594	,976		,612			
Sc8	,505	,976		,604			
Sc6	,551	,973		,595			
Sc7	,584	,984		,588			
Szc8	,609	,979		,564			
Mtrc8	,634	,988		,530			
Szc2	,710	,960			,686		
Mtrc2	,675	,971			,660		
Szc3	,642	,979			,650		
Sc5	,677	,965			,644		
Szc5	,650	,959			,643		
Sc2	,670	,967			,640		
Mtrc5	,633	,984			,597		
Sc3	,687	,978			,590		
Sc4	,608	,976			,576		
Szc4	,633	,978			,571		
Mtrc4	,616	,981			,571		
Mtrc3	,578	,979			,515		
Szc1	,723	,953				,717	
Mtrc1	,708	,951				,716	
Sc1	,460	,973				,555	

Step 5. Confirmatory Factor Analysis

In order to test whether the four-factor model obtained from the EFA complies with the data and to support the factor structure obtained from the EFA, CFA was performed in the AMOS statistical program with the 692-person data set used in Step 4 (Meydan and Şeşen 2015: 57). In the data set, the skewness value of each variable is less than 2 and the kurtosis value is less than 12. Variables obtained from the normal distribution.

Since there is no missing data in the data transferred from SPSS to AMOS, covariances are created among the error terms under the same implicit structure.

Table 4. Covariances Groups

DC Items	Error Terms	Estimate	S.E.	C.R.	P
Szc12-Mtrc12	e1-e3	,105	,011	9,443	***
Szc10-Sc10	e8-e9	,103	,012	8,856	***
Szc9-Mtrc9	e10-e12	,155	,015	10,036	***
Szc6-Sc6	e15-e18	,116	,013	8,726	***
Szc2-Mtrc2	e22-e23	,107	,014	7,753	***
Szc2-Sc2	e22-e27	,145	,016	9,318	***
Szc5-Mtrc5	e25-e26	,136	,014	9,584	***

The high correlation between the factors constituting the 4 sub-components of the scale increased the likelihood of variables forming common factors. Factor correlation coefficients: MD-TD: 0.870*; MD-SD: 0.829*; MD-AD: 0.725*; TD-SD: 0.887*; TD-AD: 0.654*; SD-AD: 0.711* (*P< 0.01).

It is preferred that the estimates values under Standardized Regression Weights on the factor to which DC 36 belonged are next: Sc2 (0.686), Sc6 (0.688), Sc8 (0.670), Sc10 (0.661) values of 4 items exceeded the level of (0.60) and Sc3 (0.796), Sc4 (0.768), Sc5 (0.761), Sc7 (0.756), Sc9 (0.760), Sc11 (0.769), Sc12 (0.825), Szc1 (0.868), Szc2 (0.723), Szc3 (0.772), Szc4 (0.779), Szc5 (0.723), Szc6 (0.739), Szc7 (0.756), Szc8 (0.736), Szc9 (0.712), Szc10 (0.737), Szc11 (0.821), Szc12 (0.806), Mtrc1 (0.789), Mtrc2 (0.721), Mtrc3 (0.753), Mtrc4 (0.730), Mtrc5 (0.750), Mtrc6 (0.765), Mtrc7 (0.737), Mtrc8 (0.789), Mtrc9 (0.753), Mtrc10 (0.789), Mtrc11 (0.790), Mtrc12 (0.800) values of 31items exceeded the level of (0.70). All of these items are among the elements of the Sc within DC. If the Sc level increases, the performance shown in successive Szc, Mtrc stages is therefore expected to affect the overall DC performance level. Sc1 (0.570) level. As the current approach, -Comparative activity between the organization and competitors for each of the accounting-finance items in the visual vision meetings- has not yet been implemented by every bank organization, the score of this item is lower than the other items. When the fit coefficients were evaluated in the analysis results, it was found that the model fit well to the data set was statistically significant (Sample 692 person). According to these values, GFI, AGFI, NFI and RFI values indicate an acceptable fit and the other observable fit values of TLI, CFI, IFI and RMSEA indicate a perfect fit (Meydan and Şeşen 2015: 37, Ichsani and Hartono 2020: 266, Çokluk et al. 2016: 271). Finally, this scale prepared is at an acceptable level (Table 5).

Table 5. Findings of Confirmatory Factor Analysis

Index	Perfect Consistence	Acceptable Consistence	Research Finding	Result
x2/df	< 3	< 4-5	3.379	Perfect
GFI	> 0.90	0.80 < 0.90	0.857	Good

AGFI	> 0.90	0.70 < 0.90	0.836	Good
NFI	> 0.90	0.80 < 0.90	0.899	Good
TLI	> 0.90	0.80 < 0.90	0.920	Perfect
CFI	> 0.90	0.80 < 0.90	0.926	Perfect
IFI	> 0.90	0.80 < 0.90	0.926	Perfect
RFI	> 0.90	0.80 < 0.90	0.890	Good
RMSEA	0 < 0.05	0.06 < 0.80	0.059	Perfect

Results

The findings of the study confirm the point of view of the Dynamic Capability Theory that emphasizes intangible resources and capabilities. The qualitative study was based on qualitative research results as a result of interviews with field experts. The three sub-elements of DC and the twelve environmental elements of the business are introduced through a Crosstab. Thus, question items were created. The questionnaire was finalized with the pilot study. According to the results of 692 people Explanatory Factor Analysis, 63.045% of the original variance explaining the Dimensions of DC was factorized into 36 items and four sub-dimensions. The dimensions of the scale were named as follows.

Account Dimension: DC for measuring and processing economic activity results where and how resources are used by the organization are examined. The information obtained is used as a communication tool for investors, creditors, and management. The Supervisory Dimension is the department where human resources, organizational structure, strategy development and DC are analyzed in order to contribute to the success of the organization. The Task Dimension examines the DC as Customers, Suppliers, Sectoral Change and Technology, R&D level. It also forms the basis of a robust macro dimension analysis. It is analyzed how the task units in the banking sector take positions and influence each other in the market. It seeks to answer the question of how bankers behave in a traditional position. In general, DC Management is always based on assumptions as bankers take their own interests into account. Task dimension also relate to the rational use of organizational resources. The Macro Dimension is the dynamic talent department that examines and analyzes the DC of the organization in financial markets, political legal environment and international environmental units.

Finally, the factor structure of the 692-person data set was supported by CFA and evidence was provided for construct validity. The fit values were found as x2/df= 3.379; GFI= 0,857; AGFI= 0,836, NFI= 0,899, TLI= 0.920; CFI= 0.926; IFI= 0.926; RFI= 0.890 and RMSEA= 0.059. The Anti-Image Correlation value, which indicates the adequacy of each item in the scale, provided the condition of being greater than 0.50 in each item. KMO values greater than 0.50 indicate that the substances contribute sufficiently to the scale. Extraction values were higher than 0.46 in all 36 items. EFA, extraction results and CFA, estimate results overlap, in the EFA which shows the quality of the items. The findings of CFA indicate extent to which the model fits the data (up to .868). The Likert Type Item,

which was developed in terms of the results obtained from this study. This is a valid and reliable measurement tool will be used in the banking sector.

Conclusion

Implementation has been made in the banking sector to determine DC in a competitive environment. The study was inspired by the fact that despite the large number of studies on DC, these studies were disconnected from each other and there is a lack of a generally accepted comprehensive scale. Most of the research has focused on one or more business capabilities. However, in order to achieve high performance, organizations must create synergies by mobilizing their capabilities as a whole. It is proof that the basic DC in the resulting structure place under the same factorial components. The high value of most items means that institutions in the banking sector are engaged in all aspects of DC. When 692 data sets were evaluated, the findings were very reliable. According to the results of all the analyses, it was found that all 36 items had high validity and reliability. The measured conceptual dimensions are consistent with the theoretical content. The 36-item questionnaire has been shown to measure DC phenomena as a Likert Type Item The DC literature has been given a holistic scale that includes all aspects of the capabilities of the business within its environmental elements as a result of this study with the four-dimensional scale.

The Dimensions of DC is an emerging instrument. New ideas and practices need to be developed for the management practices of banks. Thus, companies can obtain new information about resource management and capabilities into a management framework integrated with DC Theory with DC application. Therefore, identifying these critical resources in future studies and using them as a means of improving DC performance will increase the success of the DC based method.

For this innovative research, it is suggested that the dynamic structure characteristics are integrated with the existing items in the questionnaire in the future in the formation of scientific judgments, as well as the applications to be made in banking and finance sector as well as in enterprises of different sizes. Or it is suggested to focus on adding a new conceptual dimension.

Ethical Approval

The study was approved by the Ethical Committee Review Board of the Near East University of North Cyprus. The study was carried out in accordance with the code of ethics.

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